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Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 21

Serial Number: 08/364334  
Filing Date: 27 December 1994  
Appellant(s): Oded Cohn, et. al.

**MAY 20 1997**

**EXAMINER'S ANSWER**

This is a response to appellant's brief on appeal filed 23 April 1997.

**I. Real Party of Interest**

The appeal brief has identified the real party of interest as the International Business Machines Corporation.

**II. Related Appeals and Interferences**

The appeal brief states that the appellant is not aware of any related appeal or interferences.

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### **III. Status of Claims**

The appellant's statement of the status of claims contained in the brief is correct.

### **IV. Status of Amendments**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

### **V. Summary of Invention**

The summary of invention contained in the brief is correct.

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#### **VI. Issues**

The appellant's statement of the issues in the brief is correct. The examiner notes however, that with respect to issues 4 and 6, the term used in the rejection is "art common knowledge", instead of "art, knowledge", as stated by the appellant.

#### **VII. Grouping of Claims**

The appellant's statement in the brief that all claims stand and fall together is agreed with.

#### **VIII. Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **IX. References of Record**

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The following is a list of the prior art of record relied upon in the rejection of the claims under appeal:

- a. Japanese Patent Application laid open No. 4-205852 (Yamazaki)
- b. US Patent No. 4,433,374 (Hanson)
- c. US Patent No. 5,420,983 (Noya)

#### **X. New Prior Art**

No new prior art has been applied in this examiner's answer.

#### **XI. Grounds for Rejection**

Claims 1-3 and 10-18 are rejected under 35 USC 103. These rejections are set forth in the prior Office action paper number 13, and are hereby incorporated by reference.

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## **XII. New Grounds of Rejection**

This Examiner's Answer does not contain any new grounds of rejection.

## **XIII. Response to Argument**

1. IS THE EXAMINER'S REJECTION OF CLAIMS 1, 2, 12, AND 18 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI WELL FOUNDED?

The Examiner's rejection of claims 1, 2, 12, and 18 under 35 USC 103 as being unpatentable over Yamazaki is well founded and should be sustained. The Examiner disagrees with appellant's statement (Brief, p. 6, paragraph 2) that the claimed invention "has nothing to do with flushing dirty entries." Both the claimed invention and Yamazaki utilizes a disk cache to hold writes so that a write transaction would not necessarily require the spin-up of a idle disk. The disk cache therefore operates at least as a write back cache, which must manage the flushing of dirty entries. A cache entry which is different than that already stored on the disk is by definition a dirty entry, and is also "new" data. Moreover, data written to the cache must at some time be written to the disk to complete the transaction. Therefore, the Examiner takes the position that Yamazaki inherently teaches a means for designating selected data within the

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cache as new data in response to a write from the computer which updates data within the cache.

Appellant has additionally argued (Brief, p. 7, paragraph 1) that one of ordinary skill in the art would not find a suggestion for storing new data within the cache and destaging the data from the cache to the disk only when the storage element has been brought to operating speed as a result of a read or write operation in the manner set forth in the instant claims. The Examiner disagrees with this contention because, as stated in the rejection of the instant claims, an artisan would be aware of the competing interests of maximizing data safety and minimizing power conservation. Data safety is enhanced by quickly flushing dirty entries, while power consumption is maximized during the spin up process and minimized in the idle state. Consequently, the Examiner believes that an artisan would find it obvious to destage data from cache to disk only when the storage element has been brought to operating speed as a result of another read/write transaction, since this would serve the competing interests of maximizing data safety and minimizing power consumption.

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2. IS THE EXAMINER'S REJECTION OF CLAIM 3 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI AND FURTHER IN VIEW OF HANSEN WELL FOUNDED?

The Examiner's rejection of claim 3 under 35 USC 103 as being unpatentable over Yamazaki and further in view of Hansen is well founded and should be sustained. Claim 3 depends from claim 1 and further recites cache bypassing features. However, appellant's arguments presented with respect to claim 3 are directed solely at limitations found in parent claim 1, and has been addressed in issue 1, above.

3. IS THE EXAMINER'S REJECTION OF CLAIMS 10 AND 14 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI WELL FOUNDED?

The Examiner's rejection of claims 10 and 14 under 35 USC 103 as being unpatentable over Yamazaki is well founded and should be sustained. These claims depend from claim 1.

However, appellant's arguments presented with respect the instant claims are directed solely at limitations found in parent claim 1, and has been addressed in issue 1, above.



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4. IS THE EXAMINER'S REJECTION OF CLAIMS 11, 13 AND 15 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI IN VIEW OF ART COMMON KNOWLEDGE WELL FOUNDED?

The Examiner's rejection of claims 11, 13, and 15 under 35 USC 103 as being unpatentable over Yamazaki in view of art common knowledge is well founded and should be sustained. These claims depend from claim 1, either directly or indirectly. However, appellant's arguments presented with respect the instant claims are directed solely at limitations found in parent claim 1, and has been addressed in issue 1, above.

5. IS THE EXAMINER'S REJECTION OF CLAIM 16 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI AND FURTHER IN VIEW OF NOYA WELL FOUNDED?

The Examiner's rejection of claim 16 under 35 USC 103 as being unpatentable over Yamazaki in view of Noya is well founded and should be sustained. This claim depend from claim 1. However, appellant's arguments presented with respect the instant claim is directed solely at limitations found in parent claim 1, and has been addressed in issue 1, above.

6. IS THE EXAMINER'S REJECTION OF CLAIM 17 UNDER 35 USC 103 AS BEING UNPATENTABLE OVER YAMAZAKI AND NOYA IN VIEW OF ART COMMON KNOWLEDGE WELL FOUNDED?

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The Examiner's rejection of claim 17 under 35 USC 103 as being unpatentable over Yamazaki in view of Noya is well founded and should be sustained. This claim depend indirectly from claim 1. However, appellant's arguments presented with respect the instant claim is directed solely at limitations found in parent claim 1, and has been addressed in issue 1, above.

#### **XIV. Period of Response to New Grounds of Rejection**

Not applicable as this Examiner's Answer does not contain any new grounds of rejection.

For the foregoing reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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May 16, 1997



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